MEMOIRS of a CORPORATION

1850 1950

Weaving a Century

CHAPTER XI

Andover Room
R
677
Pac

PACIFIC MILLS

ANDOVER PUBLIC LIBRARY
3 1330 00327 3475

MEMOIRS *of a* CORPORATION

The Story of Mary and Mack and Pacific Mills

with the editorial assistance of Josef Berger

Weaving a Century

PACIFIC MILLS

Executive Offices: 140 Federal Street

BOSTON, MASSACHUSETTS

Andover Review
R
677
Pac
v. 11

Copyright, 1950, Pacific Mills, Boston, Massachusetts

Privately printed in U.S.A.
THE BARTA PRESS • BOSTON

DEDICATION

To the memory of those gallant workers of Pacific Mills who died in service of their country on the battlefields of four wars, this series of booklets is reverently dedicated . . .

PRESIDENT AND TREASURER OF PACIFIC MILLS

PACIFIC MILLS

Officers and Directors

1850		1950
Abbott Lawrence	*President*	Henry M. Bliss
Jeremiah S. Young	*Treasurer*	Henry M. Bliss
W. C. Chapin	*Vice-President*	Clifford B. Hayes
(Agent, 1853-1871)	*Vice-President*	E. Dean Walen
	Vice-President	J. Edmund Bradley
	Vice-President	James Diephuis
	Vice-President	Paul Groover
	Vice-President	Webster E. Plaisted
	Assistant Treasurer	Rufus F. Hale
	Assistant Treasurer	Frederick S. Whiteside
A. Huntington Clapp	*Secretary*	Dwight B. Billings
	Assistant Secretary	Theodore R. Peary

Directors

Abbott Lawrence
James L. Little
William C. Chapin
John A. Lowell
James W. Paige
J. Wiley Edmands
G. Howland Shaw
George H. Kuhn

Edwin S. Webster
F. L. Higginson
Malcolm B. Stone
Henry M. Bliss
Samuel Cabot
A. Murray Howe
J. P. Spang, Jr.
E. Dean Walen
Clifford B. Hayes
Sinclair Weeks
J. Edmund Bradley
Wm. H. Claflin, Jr.
Richard L. Bowditch
John T. Noonan

This is the eleventh and last of a series of booklets published by Pacific Mills in the current year in commemoration of the founding of the company one hundred years ago.

XI

As We Go Ahead

(Mack, a fourth-generation employee of Pacific Mills, and his wife, Mary, have toured all the plants and offices of the firm that once employed Mack's great-grandfather. In this chapter they are told of the work Pacific has done in research and the development of new products.)

New and more desirable fabrics evolve through two lines of human endeavor, art and research. These are quite distinct. In art, man creates; in research, he discovers what nature has created and seeks ways to adapt the findings to his own use. As a laboratory technician once put it:

"When a beautiful bubble dancer with only a big balloon for cover goes through her precarious routine in a night club for a table of tired business men, that's art. When a college student comes up and pokes the lighted end of his cigarette into the balloon, that's research."

For a hundred years Pacific Mills has carried on its own researches — a bit more constructive than bubble-busting — to produce new and better fabrics at prices the American public can afford.

On their tour of Pacific Mills, Mary and Mack saw laboratories at work on new developments in wool, cotton and rayon

clothmaking. They met specialists in engineering, physical and chemical research, the three main branches of science applied to textiles. They saw machines designed especially to meet Pacific's needs and learned of processes no other textile mill had developed.

In New York they were told of Pacific's many past accomplishments and of some of the things it still hopes to achieve.

One of the most important jobs of the textile engineer, they learned, covering all phases of a big mill's operations, is the setting of fair and optimum standards.

. . .

When you go into an antique shop to buy, say, a blown-glass pitcher made in olden times (their informant began) the bubbles and irregularities in the glass don't bother you. In fact, you rather like them, not that they really make the pitcher prettier — to be honest about it — but because they prove it's old and made by hand.

That's all very well in antiques. But in the mass-produced output of today's machine age, irregularity is poison. When we turn out anything that has "bugs" in it, it comes back on us as "seconds." And that's expensive.

Whether in the finished product or in the process of manufacture, irregularity is abhorred by mass production because it raises costs, and lower cost is the very reason-for-being of all mass production.

That is why we set standards for our products and for our processes and stick to them. Some people look down their noses

at standardization. They don't like the idea of a million glass pitchers all exactly alike. Yet if those pitchers weren't made that way, a million American homes wouldn't have any at all. They couldn't afford them.

The same goes for refrigerators and automobiles and the fabrics clothes are made of. Rather than indulge in the old-time luxury of irregularity, which only the few can pay for, we prefer to turn out cloth by closely standardized methods so that millions of people can wear it.

Behind the contribution of Pacific Mills' Standards Department lies an enormous body of research, involving surveys, tests and time studies. Plant layouts, materials, processes, costs, work assignments, wages — for all these phases of mill operation, and many more, we must stick to scientifically fixed standards if we are to keep down waste, in both dollars and time, to an absolute minimum.

The laboratory men can do things that mean real money to you and me when we go to buy clothes. That department has made many discoveries since Pacific set it up in 1941.

Incidentally, to get started in physical research as applied to textiles, the company had to train a director especially for the job. Back in the middle thirties, when the project was first planned, there just wasn't any one man who knew enough about all phases of this specialized work to direct a laboratory.

Pacific took its problem to the Massachusetts Institute of Technology and proposed that a four-year course be given, covering all branches of textile technology and textile physics.

Behind the contribution of Pacific Mills' Standards Department lies an enormous body of research.

M. I. T., realizing the importance of the project, agreed to set up the course. It was the first of its kind in America. Since then courses in other institutions have been patterned after it.

. . .

For much of the betterment in wool, Pacific is indebted to its Chemical Research Department. In this effort, which has been going on at Lawrence for a century, our researchers have been prodded in recent years by the competition of other fibers that can be obtained more cheaply.

For outer clothing, wool has many desirable qualities. It can serve our needs in all seasons; it lets the skin "breathe"; holds its shape, wears longer; and can be made into many kinds of fabric, light or heavy, soft or hard, smooth or rough.

But wool costs more, too. Since synthetics began offering serious price competition, the tasks facing our wool researchers have been, first, to cut further into manufacturing costs and, second, to create fabrics that take the fullest advantage of the natural qualities of wool fiber.

One of the more promising avenues toward lower manufacturing costs has been in finishing and dyeing by continuous process instead of batch processing. What this means is a general streamlining, a new flow-charting of the whole woolen and worsted industry.

Better control to cut out losses arising from the reaction of wool fiber to alkali, steam and bacteria is another road to cost reduction. Our chemists and mechanical experts have been making good headway along both these lines.

We have developed the fabric, too, in many new ways. One of the big "ten-strikes" in textile research of recent years, for example, was Pacific's success in producing washable wools — PACIFIXED.

Pure wool cloth, but so treated that it could stand soap and water without shrinkage, loss of color or other ill effect — here was a secret textile men had been trying to work out for generations! Pacific laboratories spent years on the problem, finally licked it with a process for making cloth for shirts and slacks and lightweight tropical and gabardine fabrics that came out of the washtub good as new. It was the first wool fabric to be approved as washable by the Laundry Institute of America.

In the blending of wool with other fabrics, too, Pacific's researchers have forged ahead of the field. A recent standout to their credit was the invention of the Pacific Converter, a machine that eliminates several steps from the old method of preparing synthetic fibers before they are spun into yarn. In 1948 Pacific let other mills use this important device on a royalty basis.

. . .

Mention has been made in these notes of the Cotton Research Company, sponsored by Pacific Mills in the 1920's as a service organization for the whole cotton manufacturing industry. When that enterprise went out of being in 1928, Pacific carried on in its own laboratories.

Through these studies Pacific has been guided in achieving in its plants at Lyman and Columbia, South Carolina, one of the most efficient operating setups in the entire industrial South.

These mills, too, draw heavily on scientific research for better products. The standout improvements in cotton fabrics of recent years haven't "just happened." A towel, for instance, so absorbent it will drink up more than its own weight of water in five seconds is not just a happy accident. It would take quite a few of those same luxurious towels to wipe away the "sweat and tears" of Pacific researchers who had the job of perfecting them!

So, too, with the new combed percale sheets and pillowcases, the print cloths, mattress covers and the long list of industrial fabrics Pacific has built up. The know-how that is in these things comes the hard way—endless laboratory research, thousands of tests, the application of formulae so intricate they would sound in the non-technical ear like a foreign language.

. . .

Testing fabrics and the making of test equipment are other important phases of our research work. Before any Pacific Mills fabric is put on the market, it must satisfy machines that "see" more than the human eye, that register the "handle" of the cloth more sensitively than human fingers.

Pacific has developed its own machinery for making such tests, under controlled heat, cold and humidity; tests for "breathing power" — that is, air permeability; for fineness of fiber; tests with a spectroscope to detect the presence of foreign matter down to a thousandth part of one per cent; with a spectrophotometer for exactness of color; and tests for resistance to abrasion, shrinkage, water repellency, even for draping quality.

As a result, when a new Pacific fabric finally is allowed to go out into the world, its chances of being most likely to succeed are pretty good.

For example, nearly twenty years have passed since the company brought out its silver cloth, for use in chests and other containers of silverware. To prevent tarnish, the cloth is impregnated with a silver compound. When it was put on the market it "clicked" because it worked. It had been tested against every possible shortcoming. Today it remains the only fabric most reliable jewelers will recommend for that purpose.

. . .

Sometimes a salesman's idea will set in motion a whole new course of research. Most salesmen know little of the technical problems a laboratory has to tackle, and as one of our researchers once ruefully remarked, "care less." But the salesmen do know a great deal about what products are needed.

Back in the early twenties, when the automobile industry was still young as a great mass producer, one of the leading makers was having trouble with its upholstery fabric. The seat-covering was attracting vermin.

An engaging Pacific salesman who could barge his way where angels feared to put a foot in the door told the auto maker what he needed was a flat fabric. The "prospect" snorted.

"I'm ahead of you. I've tried that. I've tried 'em all. They pucker up when you've sat on 'em any length of time. That wrinkles clothes and then the ladies object."

"A flat fabric that won't pucker? I can give you just the

thing," the salesman answered, without the slightest notion of what "the thing" would be.

The manufacturer was excited. "When can you show me a swatch?"

"Well, now, that depends on how much you'll take."

"If it's what I want, I'll take a million yards."

"In that case I can show you a swatch in two weeks."

The salesman rushed back and told the research staff he'd sold one million yards of the non-existent fabric, described its properties, and said they'd damn well better produce a swatch in a hurry.

"But there isn't any such thing," the technicians said. "We can't pull miracles out of the air, man!"

"Making that sale was a miracle," he came back. "If I can do it, you can do it."

The result was an automobile fabric made up in a weave known as Bedford Cord, filling the bill exactly. And Pacific in subsequent years added millions of dollars in business through the sale of Bedford Cord upholstery covering, is selling it to this day.

To the alert mind of another salesman Pacific owes the substantial business it has done in inner linings for neckties. Linings used to be made of cotton flannel. Pacific, in response to the salesman's request, made up some linings of worsted in lower grade stocks, cut on the bias.

The superiority of wool fabric for this purpose lay in its resiliency. Next time you take off your tie, you can see how

that bias-cut wool fiber will stretch and then snap right back into shape. Keeps the wrinkles out of the tie and makes it slide better inside your collar.

This gave the researchers the idea that worsted cloth, because of that same snap-back, might have an edge on other fabrics as covering for the steam-ironers used by laundries to press shirts.

It worked. With wool on those machines, there was much less tearing of shirts. Also, whereas the coverings on the steam presses formerly had to be renewed twice a day, those made of worsted would last two months. This opened another nation-wide outlet.

Also to a Pacific salesman belongs credit for the idea of the popular crib sheet the company began making a few years ago — a sheet with mitred corners fitting over the mattress to hold it down, so that the baby doesn't develop wrinkles before his time, and in the wrong place.

Ideas — for new manufacturing methods, new fabrics, new uses, new markets — are popping up all the time in our organization. That's as it should be, as we like it. But when an idea has been approved from every other angle, it must still run the gamut of the researchers. No matter how good it seems or how much we may want it, the okay that counts most — or the final veto power — rests with the lab men who "make the miracles."

. . .

So ended the travels of Mary and Mack through Pacific Mills' far-flung enterprise. On their way to Lawrence they stopped in Boston to report back to the main office.

The company official who in the beginning had sent them on their tour gazed across his desk at them. Then he smiled. He thought he saw, in those two young faces, the thing he had hoped to find there when they came back to him — not gratitude to the management, primarily, for a pleasant and interesting time, but rather a look of pride — pride in the kind of company they worked for and in their own self-identification with that enterprise. They were still a little shy, and sat there looking as if they might have a lot to say but were waiting to be asked.

"Well," the company official inquired, "any observations?"

Mary was the first to speak up.

"It was fun, and we certainly learned a lot about how they make cloth. But there were other things, too — I guess even more important than that."

"And what would you say was the most important thing you learned, Mary?" asked the company official.

"Well, I guess it was what that styler told us in New York. It kind of sticks in my mind. He said Pacific Mills has helped America to be a democracy. He told us Pacific has done more than any other company to make clothes democratic — so you don't have to dress one way if you're only a mill worker and another way if you're a banker. I think that's important and we ought to be proud of it."

Mack, his usual reserve melting away under things he was just bursting to say, joined in now.

"But you know, sir, going to all those places and hearing about those times in the past, all the way back for a hundred

years, I think we were finding out about more than just a textile company."

"What was it you were finding out about?"

"It was like looking at America, like seeing a little slice of it cut right out from the middle."

"And you approve?"

Mack nodded. "It works."

"That all?"

"Not quite, sir. It isn't easy for me to put it into words, but — well, it makes a fellow feel kind of good, knowing all that and being a part of it."

"Proud you're part of Pacific Mills and Pacific Mills is part of America?"

"I guess that's it," Mack said. "I remember, before you sent us out on this trip, you said you were interested because I was a fourth-generation Pacific Mills man. You asked me whether I had any special feeling about that — my family and Pacific Mills — whether I thought of my family and the company like they were going somewhere together. I told you I hadn't thought about it that way, that I was getting paid what my work was worth and I guessed my dad did, too, and my grandfather and great-grandfather and, the way I saw it, that was fair enough. I said that because it was the truth.

"But on this trip," Mack went on, "I caught what you were driving at. When a fellow can see an outfit like Pacific Mills the way we've seen it — all the way from the beginning, and growing through the century, and then the way it is today — he

gets more of an idea what it's all about. When you see how the story ties in with the whole country, you get the feeling of belonging to something that's pretty big and pretty important. And when your own family is tied into the picture, too, through all that time, why, then you've got a connection, you've got a place in the world that means something more than a number and a name on a payroll. You're not just peddling your labor from one day to the next, like a fellow with a pushcart on the street, selling cabbages to the strangers that go by.

"While my family was working for Pacific Mills, and getting paid for it from one generation to the next, Pacific was working for America, the whole American people. Pacific was getting paid, too. But it doesn't end there — just a job of work, a payoff and nothing else. It goes on, and there's more to a man's work, and his place in the country, than cabbages for sale on a pushcart to any stranger that goes by.

"Of course," Mack added, "without our pay we don't eat. So if we're talking about things that matter, the pay envelope comes pretty high on the list. But there's something else a man's got to get out of his work, too, it seems to me, if he really wants to be satisfied. I think you have to know, while you're earning your living, you're doing something for people, people outside yourself. I don't mean *certain* people — not this one or that one — but *the* people, the whole country, all rolled up into one.

"Mary hit on the big thing when she picked out what that styler told us in New York — that the most important thing about Pacific Mills is what it's done to give any man in America

the right to dress as well as any other man, no matter whether he clips coupons for his living or cleans out sewers. Maybe you can pay a hundred dollars for your suits and maybe I can't. But for my fifty dollars I can buy a suit that'll look just as good as yours when we're out on the street. My great-grandfather couldn't do that. And that's what's important about Pacific — something it's done for the people. I guess that's what makes me feel kind of good about being part of Pacific Mills."

In Closing

This is Pacific Mills again.

You've looked back with me, Gentle Reader, over the long, full past, a hundred years since I was born. We've lived over a few of the scenes, met some of the people — just a glimpse, really, at that busy century and, of all those hundreds of thousands of names and personalities, only a handful. To tell it all, to bring in everybody, would be like trying to call the roll in an anthill.

But now, as the orators at college commencements profoundly point out, "the future lies ahead."

They refer, of course, to the future of people. A person can "show promise" or "look forward to a ripe old age." But what about corporations?

Well, here I am, still presumptuously talking to you in the first person singular, still unable to get it out of my non-existent head that corporations, having no souls, never talk like this, and that I've got no business sounding off to you as if there were gladness somewhere inside me at the prospect of another hundred years of living and working in America.

Another hundred years. What a panorama, what a wide, exciting range for new plans, new hopes! If someone were to tell us, today, what the world will be like in the year 2050, probably we'd do what a big sheep-grower from the West did at a party given for him in New York by a group of wool buyers. They gave him oysters. He put one in his mouth, then spat it out on the table and snorted, "Many a damn fool would have swallowed that."

In this fast-moving world it would have been utterly impossible for Abbott Lawrence and the other founders of Pacific Mills to predict the scene of 1950. And so with any guesses we might make about the twenty-first century.

Will the industry of that world, the techniques of manufacturing, even of selling and distributing, resemble those of today? As we look around us and consider how very advanced we are, we may wonder how there could be much difference — or, for that matter, why there ought to be. We're pretty good, aren't we?

Well, folks figured the same way back when I came into the world. And yet, there were no turbo-generators then to work up power for the machinery on the banks of the Merri-

Another hundred years . . . what a panorama, what a wide, exciting range for new plans, new hopes!

mack; there were no automatic looms, no aniline dyes, nothing comparable to the marvelous finishing machines, the microscopic and electronic testing equipment used in that same mill today.

In Pacific's offices there was no telephone, no adding-machine, typewriter or card-punching mechanical thinker. There was no radio, no such thing as same-day market reports from the outside world.

If you were living in that time and you had a dream of 1950 and saw all these things; if you believed them and told people around you they were going to come true — even in a hundred years — they would have gently but firmly led you into a padded cell and searched you for metal objects.

The "silent movies" of the 1920's, when they are reshown now, seem very funny to us, especially those that weren't meant to be. We look at old daguerreotypes and think the clothes of our forebears were quaint and amusing. Going back still further, to the days of homespun, we wonder how people found the time to clothe themselves at all. How far, we think, our own world has come along from all that!

Well, we needn't feel too smug. The time will come when our descendants will wonder in turn how on earth we managed to get along with what we had. They will smile, too, at pictures of us in the clothes we were wearing back in that quaint, primitive year of 1950.

But that's just what's so exciting about being part of a progressing society in a free country — the knowledge that to-

morrow's world will be 'way ahead of this one, and the deep satisfaction that comes of feeling you might have something to do with it.

In the long climb from 1850, Pacific Mills "Weaving a Century," has had something to do with the making of this wondrous America of 1950. There is more climbing ahead. There is more, much more, to be done.

That's where the real thrill comes in this business!

This is the last of eleven installments of "Memoirs of a Corporation, Weaving a Century." If you have not received preceding installments, Pacific Mills will be glad to send them to you on request. Write to Pacific Mills, 140 Federal Street, Boston 10, Mass.